

Notice of Allowability

Application No.

10/006,166

Examiner

Sow-Fun Hon

Applicant(s)

LAZAREV, PAVEL I.

Art Unit

1772

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed 3/13/06.
2. ☒ The allowed claim(s) is/are 1-5, 18-21, 34-36 and 49-51.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 3/13/06
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date 5/22/06
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☒ Other See Continuation Sheet.

Continuation of Attachment(s) 9. Other: The drawings filed 12/04/01 are accepted by the examiner.

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Tianjun Hou on 05/22/06.

The application has been amended as follows:

2. Abstract: delete lines 1-3, "The invention ... matrix systems of light indication, etc."
3. Abstract: remove paragraph indentation so that abstract is a single paragraph.
4. Specification: page 1: below title "BACKGROUND", replace subtitle "Related Applications" with "Foreign Priority".
5. The following is an examiner's statement of reasons for allowance: the closest cited prior art of record, EP 0961138 fails to teach or suggest, even in view of US 5,764,001, US 4,422,730, US 4,674,840, US 6,147,726 and EP 0604903, a liquid crystal information display comprising a front panel of functional layers facing an observer, a rear panel of functional layers opposite the front panel, and a layer of liquid crystal material twisted by 240° between the front and rear panels of functional layers, wherein the layer of liquid crystal material has parameters providing at least one interference maximum or minimum of transmission or reflection for at least one linearly polarized component of incident beam light at at least one wavelength reflected or

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transmitted at the exit of the front panel, the parameters being achieved at least in the state of the liquid crystal material with applied electric field, said parameters comprising thickness, optical thickness, ordinary refractive index, extraordinary refractive index, and the ratio of ordinary refractive index to extraordinary refractive index, wherein the thickness is in a range of from 1 μm to 10 μm . While EP 0961138 and US 6,147,726 demonstrate that the algorithms for calculating multilayer interference systems, using the number of layers and the thickness of the layers, are well known to one of ordinary skill in the art, and EP 09061138 teaches at least one interference maximum or minimum of transmission or reflection for at least one linearly polarized component of incident beam of light at at least one wavelength reflected or transmitted at the output of the polarizer, none of the references teach that a layer of liquid crystal material twisted by 240° between the front and rear panels of functional layers, has the parameters providing at least one interference maximum or minimum of transmission or reflection for at least one linearly polarized component of incident beam light at at least one wavelength reflected or transmitted at the exit of the front panel, the parameters being achieved at least in the state of the liquid crystal material with applied electric field, said parameters comprising thickness, optical thickness, ordinary refractive index, extraordinary refractive index, and the ratio of ordinary refractive index to extraordinary refractive index, wherein the thickness is in a range of from 1 μm to 10 μm .

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Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication should be directed to Sow-Fun Hon whose telephone number is (571)272-1492. The examiner can normally be reached Monday to Friday from 10:00 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon, can be reached at (571)272-1498. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

S. Hon

Sow-Fun Hon

05/24/06

Harold Pyon

HAROLD PYON

SUPERVISORY PATENT EXAMINER

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5/25/06